

# 'SACRED GROVES': AN INSIGHT INTO DALMATIAN FOREST HISTORY

## 'SVETI GAJEVI': UVID U PROŠLOST DALMATINSKIH ŠUMA

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### SUMMARY

The French administration in Dalmatia (1805-1813) was short but is often praised by foresters as advanced in terms of woodland management because of their establishment of so-called sacred groves or *sacri boschi*. Based on archival sources and 19<sup>th</sup> century maps, this research explores the establishment and demise of sacred groves and places them within the broader forest history of Dalmatia. It reveals that the literal translation of the term *sacro bosco* as sacred grove (*sveti gaj*) by the 19<sup>th</sup> century foresters was not precise which caused misrepresentation and misunderstandings of what *sacro bosco* actually meant. The more appropriate translation would be forbidden groves (*zabranjen gaj*) as this also reflects the nature of these woodlands, which were in fact woodland sections where exploitation was prohibited. Establishment of forbidden groves was not a French invention since the practice was widely used before the French and during the Austrian Empire (1814-1918). In the second half of the 19<sup>th</sup> century and with the change of official language, the Italian term *sacro bosco* was replaced with the Croatian term protected area (*branjevina*).

Keywords: sacro bosco, sveti gaj, sacred grove, forbidden grove, forest history, Dalmatia

### INTRODUCTION UVOD

With organised forestry originating in the 18<sup>th</sup> century, Croatia has a long tradition of well documented forest exploitation. However, research on forest history of Dalmatia, Croatia's coastal region (Fig. 1) where organised forestry was established much later, is rather scarce. The first works in this field were by Kesterčanek (1882-1883) who was a lecturer in history and literature of forestry at the Royal Agriculture and Forestry College in Križevci (Skoko, 1997). His works paved the way for the Yugoslav writers in forest history, but still very little research was done on Dalmatian woodlands. Foresters such as Marčić (1935; 1956) and Vajda (1954) provided mainly brief overviews of the development of Dalmatian forestry much of it based on Kesterčanek's work while Ivančević and Piškorić (1986) focused on the

history of reforestation. Jedlowski (1975) made an elaborate study of Dalmatian woodlands under the Venetian governance from the 15<sup>th</sup> until the end of 18<sup>th</sup> century while forests in the borderland area between Ottoman Bosnia, Venetian Dalmatia and Habsburg Monarchy were studied as a part of overall landscape change in the 18<sup>th</sup> century (Kaser, 2003; Fuerst-Bjeliš, 2003; Fuerst-Bjeliš et al, 2011). Some recent overviews of forest history in Dalmatia exist such as that of Meštrović et al. (2011), but they are mostly reviews of existing research, rather than new comprehensive studies. As a result, the 19<sup>th</sup> century woodlands in Dalmatia remain under-researched in forest history.

The short period of French administration in Dalmatia (1805-1813) is particularly poorly studied despite being frequently mentioned by foresters as a golden age for Dalmatian woodlands. This view is largely based on several archi-

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**Figure 1.** Geographical location of Dalmatia and Šibenik-Knin county.  
**Slika 1.** Geografski položaj Dalmacije i Šibensko-kninske županije.

val documents which were made use of by Kesterčanek. Foresters have tended to highlight the French effort to restore Dalmatian degraded woodlands and among the initiatives to achieve this was the establishment of the so-called *sacri boschi*. *Sacro bosco* is an Italian term that originates from the time when Italian was still the official language in Dalmatia and was used by the administration and aristocrats, whereas Croatian was used only by the common people until 1883 when it became official for the whole of Dalmatia (Obad, 1976). Kesterčanek (1882a) was the first who translated the term *sacro boscho* as *sveti gaj* which means sacred grove, and this was later adopted by foresters in the 20<sup>th</sup> century. Beside several archival documents that have been mentioned ever since Kesterčanek, which describe the French establishment of these sacred groves, little is known about what these woods were like and perhaps more importantly, what happened to them. Ambiguity about the proper translation of *sacro bosco* still exists as Meštrović et al. (2011) translate it as *crkvene šume* or church forests. Also, these woodlands should not be confused with the sacred groves that according to Matić (2012) were established throughout Croatia in ancient times. Research by Chandran and Hughes (2000) and Watkins (2018) confirms that throughout Mediterranean small patches of forests were proclaimed as sacred groves in Greek and Roman times and they were protected from exploitation as it was believed that the location was inhabited by gods or spirits.

According to the existing literature, the sacred groves discussed in this paper were established by the French and represented a new element in the landscape and a new form of forest management. Kesterčanek (1882a), later on supported by Marčić (1935) and Vajda (1954), argued that these sacred groves were neglected by the Austrian Empire once they took over Dalmatia, and were destroyed so they disappeared from forest history sources. The aim of this paper is to contribute to understanding of Dalmatian forest history by exploring the origins and the demise of the so-called sacred groves.

## MATERIALS AND METHODS IZVORI I METODE

This research represents a critical analysis of archival sources, publications and maps from the 19<sup>th</sup> century and is focusing on the area of Šibenik as a case study. Šibenik area is located in the transitional zone between central and northern Dalmatia and it shares many historical and social characteristics with the rest of coastal Dalmatia making it a good study example for the whole region. The majority of archival work was carried out in the State Archives in Šibenik (HR-DASI) where material related to woodlands is stored in three collections: Šibenik 19.-20.st. Šumarstvo, Šumarstvo 19.-20.st. and Hortikultura: Šibenski perivoj/Šumarstvo. All sources are written in old Italian which was

the official language in Dalmatia at the time. Cadastral records were obtained from State archives in Split (HR-DAST) whereas third military survey maps can be previewed through MAPIRE map portal and obtained from BEV. These sources were supplemented with 19<sup>th</sup> and early 20<sup>th</sup> century publications on Dalmatian woodland history, mostly from archived Forestry journal issues.

### ESTABLISHMENT OF 'SACRED GROVES' DURING FRENCH PERIOD (1805-1813) – OSNIVANJE SVETIH GAJEVA TIJEKOM FRANCUSKE VLADAVINE (1805-1813)

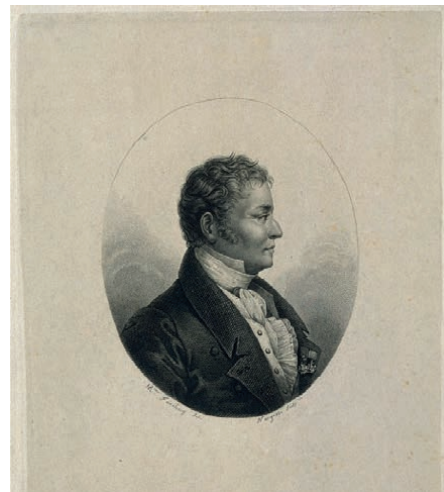
By the time the French conquered Dalmatia in 1805 there were already numerous reports about the poor condition of woodlands in the region. Travel accounts from the second half of the 18<sup>th</sup> century (Anonymous, 1775-1776, according to Novak, 1960; 1966; Fortis, 1774) describe Dalmatian woodlands as scarce and without properly developed trees that could be used in construction or any kind of industry. Valuable patches of forests were noted as preserved only on remote and inaccessible mountaintops in the hinterland, near Norin and Cetina rivers and on Korčula and Hvar islands, while the rest was 'scrubland rather than forest, bushes rather than trees' scattered in patches across the landscape (Anonymous, 1775-1776, according to Novak, 1960, p.486).

In Šibenik area much of the terrain was barren and used predominantly as pastures. Fortis (1774) wrote that landscape of the islands 'disgusts the eye with the display of hills that are too high, too stony and naked' (p. 169). This is because coastal villagers often kept sheep on these islands and visited them for firewood collection as soon as something grew on them (Anonymous, 1775-1776, according to Novak, 1962). Fortis (1774) reported that 'inconsiderate brutality of the inhabitants' was also the reason for 'horridness and nakedness of mountains' in the vicinity of Zlosela (modern Pirovac) (p.159).

Similar reports originated from the French administration once they took over control of Dalmatia in 1805. Among them is a circular that was issued to all Dalmatian delegates and captains of districts in which the administration expressed concern about devastated forests. They believed this devastation was of recent origin and was caused by the local people who cut wood without supervision and care for the consequences.<sup>3</sup> Consequently they thought that what used to be a prosperous, rich region with fertile soils was

rapidly transformed into a barren wasteland.<sup>4</sup> The French administration regarded management of forests as one of its top priorities<sup>5</sup> and wanted to restore the prosperity of the region through a vigorous fight against forest violations, strict reinforcement of regulations and reforestation.<sup>6</sup> The Dalmatian provincial governor, the Venetian agricultural improver and chemist, Vincenzo Dandolo (1715-1819) (Fig. 2), who was appointed by Napoleon, had a special interest in Dalmatian woodlands (Grubić, 1928). Dandolo began work on the improvement of woodland management immediately after his appointment. The first nursery was established near Zadar, and more than 100,000 seedlings were ordered from Italy. Several regulations concerning the prohibition of cutting young trees, wood export and burning of fires in woodlands were also enacted. Goat keeping was perceived as a very significant problem and was tackled by steadily increasing pasture taxes in the hope of discouraging people from keeping them (Marčić, 1935; Vajda, 1954). According to Grubić (1928) Dandolo implemented serious sanctions for violators of regulations and confronted high ranking military officers who regarded forests as a free source of firewood for army. However, these efforts were not considered effective enough and Dandolo desired to find a new way to regenerate the extensive degraded forests.

One of Dandolo's most famous legacies is the sacred grove. In modern literature they are often considered as the most valuable contribution of French woodland management in



**Figure 2.** Vincenzo Dandolo. Stipple engraving by J. D. Nargeot after Augustine Fauchery (Burgess, 1973).

**Slika 2.** Vincenzo Dandolo. Točkasta gravura od J. D. Nargeota prema Augustine Fauchery (Burgess, 1973).

<sup>3</sup> HR-DASI-Šibenik 19.-20.st. Šumarstvo. Undated, c. 1809-1812. *Circolare ai Capitani circolari ed alle Preture*. N. 11641-359.

<sup>4</sup> HR-DASI-Šibenik 19.-20.st. Šumarstvo. Undated, c. 1809-1812. *Circolare ai Capitani circolari ed alle Preture*. N. 11641-359; HR-DASI-Šibenik 19.-20.st. Šumarstvo. 1808. *L'Ingegnere de Seconda Classe al Sig. Commisso. Straordino di Governo in Seben*. N. unknown; HR-DASI-Hortikultura: Šibenski perivoj/šumarstvo. 21st March 1810. *L'uditore nel consiglio di stato*. N. unknown.

<sup>5</sup> HR-DASI-Šibenik 19.-20.st. Šumarstvo. Undated, c. 1809-1812. *Circolare ai Capitani circolari ed alle Preture*. N. 11641-359.

<sup>6</sup> HR-DASI-Šibenik 19.-20.st. Šumarstvo. 1808. *L'Ingegnere de Seconda Classe al Sig. Commisso. Straordino di Governo in Seben*. N. unknown.

Dalmatia, and a proof of the care they had for woodlands. A decree published during the Austrian Empire in 1821 provides crucial information about sacred groves.<sup>7</sup> According to this document, sacred groves were a French answer to the disastrous effects of damaging practices in Dalmatia such as digging of stumps, cutting of young trees, debarbing and excessive pasture. The aim was to mitigate the consequences this had on the agriculture and overall economy of Dalmatia. Therefore, the French administration passed a regulation which mandated that 'each village designates an area to be enclosed with a dry-stone wall for the purpose of establishing a woodland denominated as *sacro*'.<sup>8</sup> These woodlands were supposed to be protected from exploitation by the threat of severe punishments and, according to Grubić (1928), the goal was to establish a prosperous patch of woodland which would serve as a base from which woodland would further expand.

According to the *Giornale Della Società* (1809, p. 338), Dandolo's idea about sacred groves was implemented in 1807 and already by the following year 360 Dalmatian villages had designated an area for this type of woodland. A delegate letter from 1809 reveals that in the vicinity of Šibenik the communes of Rupe (*Ruppe*), Dubravica (*Dubraviza*), Bratiškovci (*Bratiscovzi*), Smrdelje (*Smerdeglie*), Piramatovci (*Piramatovzi*), Čista (*Cista*) and Sonković (*Sonkovich*) established their sacred groves over an area of ten Italian paces<sup>9</sup> or more, while Bribir municipality could not stretch it over an area of more than five paces. Sacred groves existed in the coastal areas of Tisno, Mandalina, Oštrica and Pigrada as well.<sup>10</sup> In the case of Oštrica and Prigrada south of Šibenik, they covered 20 *campi*<sup>11</sup> and 200 *campi* respectively, which translates to 5.5 ha and 55 ha. Marčić (1935) argued that these woodlands had to cover an area of 3.5 to 7 ha, but in reality, their extent varied considerably.

The existing vegetation in sacred groves was made up of locally found species and their main purpose was the provision of firewood. In the case of the eight mentioned hinterland villages trees and shrubs were oak (*Quercus pubescens*), manna ash (*Fraxinus ornus*), hornbeam (*Carpinus orientalis*), holm oak (*Quercus ilex*), mastic (*Pistacia lentiscus*) and terebinth trees (*Pistacia terebinthus*), olive (*Olea*

*europaea*), wild cherry (*Prunus avium*), juniper (*Juniperus*) and thorny scrubland (itl. *spine*). The sacred grove on Oštrica peninsula provided wood from oaks, juniper and unspecified woodland in general, probably species commonly found in maquis. At Prigrada area, firewood was derived only from oak, juniper and '*Pino selvatico*'.<sup>12</sup>

Reforestation in these groves was a crucial part of their management and they represent evidence of very early organised reforestation.<sup>13</sup> For instance, in sacred groves in the hinterland, both seeds and seedlings were planted among rocks in an effort to promote the growth of high-quality wood which would have been used for all kinds of construction. Tree species that were considered included lime (*Tilia europaea*), cypress (*Cupressus pendula*), catalpa (*Catalpa bignonioides*), tulip tree (*Liriodendron tulipifera*), sycamore (*Platanus occidentalis*) and false acacia (*Robinia pseudoacacia*).<sup>14</sup> Out of these, only cypress and lime grew in the area naturally while three were from North America. Seeds were also distributed among senior Captains in the communes by government inspectors, and instructions were provided to villagers on proper ways of managing the soil and irrigation in the case of drought (Grubić, 1928). The work itself was carried out by village volunteers but it required a knowledgeable professional to supervise the work.<sup>15</sup> According to Grubić (1928), renewed hostilities between Austria and France increased the need for fuel and construction wood for the military and local administrations were obliged to help them procure this. As a result, much of Dandolo's efforts were destroyed.

#### SACRED GROVES DURING THE AUSTRIAN EMPIRE (1814-1918) – SVETI GAJEVI TIJEKOM AUSTRIJSKE VLADAVINE (1814-1918)

According to Kesterčanek (1882b), once the Austrians took control over Dalmatia 'all French regulations and laws, even those benefiting our people, were abolished' (p. 324) and consequently woodlands were completely neglected. Similar view was later adopted by Marčić (1935). However, Grubić (1928) argued that as far as woodland regulations were concerned, all measures that were implemented by the French were maintained. Archival sources from Šibenik confirm that, on a local level, French regulations were up-

<sup>7</sup> HR-DASI-Šumarstvo 19.-20.st. 23<sup>rd</sup> January 1821. *Notificazione/Oznanjenje*. N. 1657-302.

<sup>8</sup> La Reggenza Italica decretata la destinazione in cadaun Villaggio di un spazio da circondarsi di muro a secco ad uso di Bosco riservato colla denominazione di sacro. *Passi*.

<sup>10</sup> HR-DASI-Šibenik 19.-20.st. Šumarstvo. Undated, c. the 1820s. *Prospetto de' Boschi Sacri eretti al Circondario Comunale di Zlarin*. N. unknown; HR-DASI-Šumarstvo 19.-20.st. 13<sup>th</sup> April 1809. *Il Delegato di Governo al Delegato Distrettuale di Governo in Sebenico*. N.302.

<sup>11</sup> *Ibid.*

<sup>12</sup> HR-DASI-Šumarstvo 19.-20.st. 13<sup>th</sup> April 1809. *Il Delegato di Governo al Delegato Distrettuale di Governo in Sebenico*. N.302.

<sup>13</sup> *Ibid.*

<sup>14</sup> HR-DASI-Šumarstvo 19.-20.st. 13<sup>th</sup> April 1809. *Il Delegato di Governo al Delegato Distrettuale di Governo in Sebenico*. N.302.

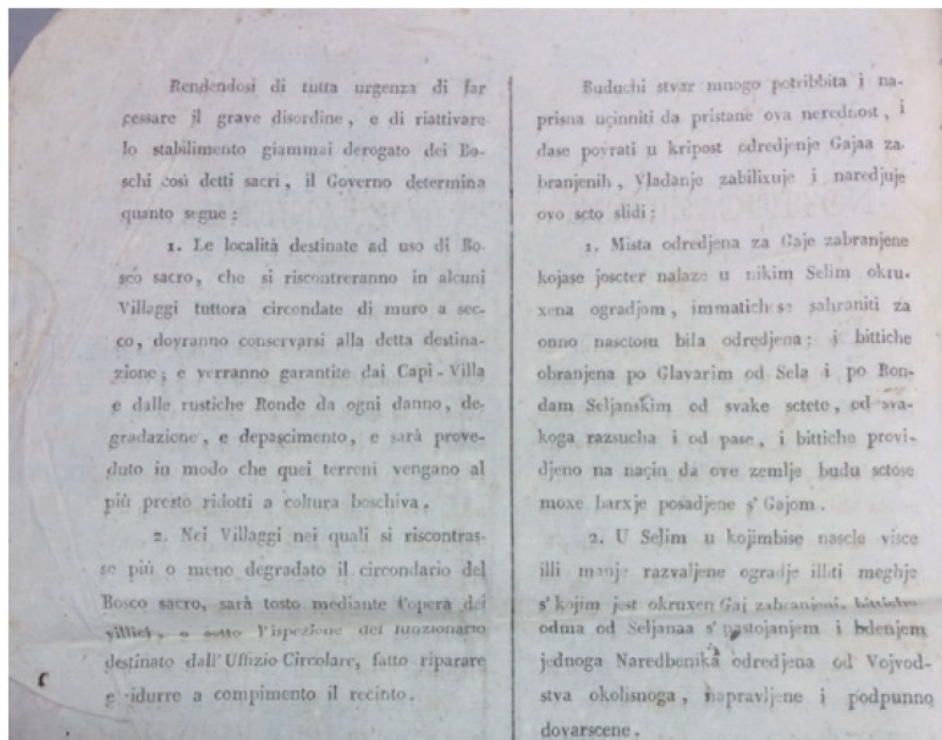
<sup>15</sup> HR-DASI-Šibenik 19.-20.st. Šumarstvo. 1808. *L'Ingegnere de Seconda Classe al Sig. Comisso. Straordinario di Governo in Seben*. N. unknown; HR-DASI-Šibenik 19.-20.st. Šumarstvo. Undated, c. the 1820s. *Prospetto de' Boschi Sacri eretti al Circondario Comunale di Zlarin*. N. unknown.

held even before the status of Dalmatia within the Austrian Empire was resolved so it is likely that the transitional period was not especially disruptive regarding the regulations (*Racolta delle leggi ed odrinanze...*, 1830). In fact, almost immediately, in 1814, further regulations concerning woodland protection were implemented (Grubić, 1928). The Austrians also retained territorial guards, who were responsible for preventing various types of criminal activities including those in rural areas, as well as village patrols and rural police for the prevention of agricultural and woodland damage (Oršolić, 2007).

However, these regulations and laws were not particularly successful and in 1821 it was reported that most of sacred groves established by the French were utterly devastated.<sup>16</sup> To rectify this situation the Austrian administration continued the practice of establishing sacred groves and in 1821 they ordered the renewal of all sacred groves that had been established by the French, along with the same regulations that existed in the French period.<sup>17</sup> The order mandated that specific areas had to be encircled with a dry-stone wall and exploitation completely prohibited so that woodland

could be established. Further regulations included the strict prohibition of cutting of any trees and shoots, digging of stumps, damaging enclosure wall and any type of pasture and were described as a repetition of those implemented by the French (*Racolta delle leggi ed odrinanze...*, 1834). Archival sources for Šibenik area confirm that the order was upheld by the local communities as archival records describe the establishment of sacred groves in Prigrada and Oštrica areas in the early 1820s confirming that this practice was not exclusive to the French period.<sup>18</sup>

The Austrian proclamation on establishment of sacred groves from 1821 brings further details about the precise name of these woodlands.<sup>19</sup> Since Italian was official language in Dalmatia until 1880s the proclamation also used the term *sacro bosco*. However, this document was bilingual, and the old-Croatian translation was also included for the proclamation and it does not use the term *sveti gaj* or sacred grove (Fig. 3). In two instances it translates *sacro bosco* as *sahranjen gaj* which translates in English as buried grove. However, this could be a mistake in transcription as in later instances the term *sacro bosco* is translated as



**Figure 3.** A part of the original proclamation on forbidden groves with text in Italian (left) and the old-Croatian translation (right) (Source: HR-DASI-Šumarstvo 19.-20.st. 23<sup>rd</sup> January 1821. *Notificazione/Oznanjenje*. N. 1657-302).

**Slika 3.** Dio originalnog proglašavanja o zabranjenim gajevima s tekstom na talijanskom (lijevo) i starohrvatskim prijevodom (desno) (Izvor: HR-DASI-Šumarstvo 19.-20.st. 23<sup>rd</sup> January 1821. *Notificazione/Oznanjenje*. N. 1657-302).

<sup>16</sup> HR-DASI-Šibenik 19.-20.st. Šumarstvo. 1821. *All' Imp.Reg. Pretura in Sebenico*. N. 735.

<sup>17</sup> HR-DASI-Šumarstvo 19.-20.st. 23<sup>rd</sup> January 1821. *Notificazione/Oznanjenje*. N. 1657-302.

<sup>18</sup> HR-DASI-Šibenik 19.-20.st. 4<sup>th</sup> June 1848. Šumarstvo. *Prospetto degli spazi poco produttivi, produttivi ed improduttivi... del Sindacato di Zlarin*. N. 1394.

<sup>19</sup> HR-DASI-Šumarstvo 19.-20.st. 23<sup>rd</sup> January 1821. *Notificazione/Oznanjenje*. N. 1657-302.

del circondario del Bosco sacro, o che li s'kojom biasce okruzen Gaj zabranjeni, illi

**Figure 4.** Section of the Austrian proclamation on forbidden groves from 1821 which translated the term *Bosco sacro* as forbidden grove (Source: HR-DASI-Šumarstvo 19.-20.st. 23<sup>rd</sup> January 1821. *Notifizione/Oznanjenje*. N. 1657-302).

**Slika 4.** Dio austrijskog proglasa o zabranjenim gajevima iz 1821 koji prevodi termin '*Bosco sacro*' kao zabranjeni gaj (Izvor: HR-DASI-Šumarstvo 19.-20. st. 23<sup>rd</sup> January 1821. *Notifizione/Oznanjenje*. N. 1657-302).

**Table 1.** Known translations of the term *sacro bosco* in the 19<sup>th</sup> century.  
**Tablica 1.** Poznati prijevodi termina *sacro bosco* u 19. stoljeću.

Source of translation <i>Izvor prijevoda</i>	Year <i>Godina</i>	Croatian translation <i>Hrvatski prijevod</i>	English translation <i>Engleski prijevod</i>
Austrian proclamation	1821	Sahranjeni gaj Zabranjeni gaj	Preserved grove Forbidden grove
Krunoslav Jović	1872	Zagajena šuma	Nurtured woodland
Kesterčanek and 20 <sup>th</sup> century foresters	1882	Sveti gaj	Sacred grove

*zabranjen gaj* which translates in English as forbidden grove (Fig. 3). A mistake between *sahranjen* and *zabranjen* in two very similar letters (s-z and h-b) is a probable occurrence with a language that was not official and spoken among the illiterate rural population. Another explanation is possible. According to Gabrić-Bagarić (2004), in medieval and early modern times, the word *sahranjen* used to mean *sačuvan* (eng. preserved) which would imply these were areas with preserved woodland. Another translation before Kesterčanek's comes from Krunoslav Jović in his translation of Guttenberg's work on Dalmatian woodlands from 1872, which was written in Italian. Jović translated *sacro bosco* as *zagajene šume* or nurtured woodlands. Indeed, according to the dictionary of old words used in Dalmatian hinterland, *zagajiti* means to 'raise or nurture through protection' (Gusić and Gusić, 2004, p. 101).

All three known translations of the term *sacro bosco* before Kesterčanek implied a woodland that was strictly managed through protection (Tab. 1). Also, the term forbidden grove most accurately reflects the type of regulations that were related to these woodlands. The denomination sacred is indeed the correct translation of the Italian word *sacro* according to old Italian-English dictionaries (Baretti, 1771; Gisupanio, 1837) and could imply some connection with church or religion. This is why, perhaps, Meštrović et al. (2011) translated the term as church forests. However, in

the mentioned proclamation and published regulations regarding sacred groves (Racolta delle leggi ed odinanze..., 1834) there was no mention of the church. In fact, in the Austrian period, protection and maintenance of forbidden groves was entrusted to local people, that is the village heads and village patrols, and the church was not involved in any way.<sup>20</sup> Also, Baretti's (1771) dictionary states that Italian word *sacrare* can mean to dedicate, which is confirmed by Cassell's Latin-English dictionary (Marchant and Charles, 1953) which says that Latin word *sacro* among other mostly religious meanings can also mean to devote, give or allot (p. 496). Because of this, it is possible that Kesterčanek went for the most obvious translation of the word *sacro* but other cases of earlier translations do match the true meaning of the term better. Following this analysis, it is proposed that the term *zabranjen gaj* or forbidden grove/woodland should be used when referencing these woodlands (Fig. 4)

Forbidden groves in Šibenik area in Austrian period were no different than those that were established in the French period. For example, Oštrica peninsula and Prigrada area south of Šibenik were described as encircled with a dry-stone wall, although a damaged one.<sup>21</sup> The vegetation here was divided between that which was already planted (*è piantato*) and that which will be planted (*è da piantarti*). The first category included unspecified oaks, juniper and 'woodland in general' and since it represented the common vegetation of the area, the term *è piantato* could also be understood as the vegetation that is already growing there. There is, however, no record of which specific species were considered for the new planting since in Oštrica woodland was already considered dense enough and for Prigrada it was stated only that species that provided firewood were needed.<sup>22</sup>

However, the cadastral plans and records of 1825 do not show any record of forbidden groves in these areas. As already mentioned, the forbidden groves in these two areas were first established by the French, so the renewal of regulations on forbidden groves issued by the Austrians implied the ones in Oštrica and Prigrada had to be re-established because they were devastated. If they had been re-established, however, strict regulations which excluded

<sup>20</sup>HR-DASI-Šumarstvo 19.-20.st. 23<sup>rd</sup> January 1821. *Notifizione/Oznanjenje*. N. 1657-302.

<sup>21</sup>HR-DASI-Šibenik 19.-20.st. Šumarstvo. 1821. *All' Imp.Reg. Pretura in Sebenico*. N. 735.

<sup>22</sup>HR-DASI-Šibenik 19.-20.st. Šumarstvo. Undated, c. the 1820s. *Prospetto de' Boschi Sacri eretti al Circondario Comunale di Zlarin*. N. unknown.

pasture and firewood collection would also mean the areas could not be used as municipal pastures, which is how they were recorded in the cadastral plans. It seems therefore that the paper regulations had little impact on the ground. This is supported by a document from 1848 which discussed woodlands of the whole Krpanj section, but also did not specifically mention Oštrica and Prigrada woodlands as being forbidden groves. It does mention, however, that the section had 'genuine richness in the woodland of cape Oštrica' and this was very important for villagers of Krpanj.<sup>23</sup> The topographic map, based on the second military survey which was printed between 1851-1854, indeed shows most of Oštrica peninsula as well as a narrow strip along the sea in Prigrada area as a woodland (Mapire.eu).

Existing literature of forest history does not mention the existence of *sacri boschi* or forbidden groves in the Austrian period and it is believed much woodland was devastated then. Indeed, in 1835 the Austrian administration called upon municipalities to employ extra territorial guards to protect woodlands because of excessive damages and violations of regulations (Raccolta delle leggi..., 1845). However, the term *sacro bosco* is still mentioned in 1848 according to archival sources from Šibenik. That year, after a survey of islands in Zlarin municipalities, it was proposed that *sacro bosco* should be established on Prvić and Žirje islands because of the lack of firewood for local communities, whereas for Žirje island pines were considered because of their use in fishing.<sup>24</sup> Therefore, forbidden groves did not disappear even by the middle of the 19<sup>th</sup> century. What did disappear in the second part of the 19<sup>th</sup> century, however, was the Italian language from the official use, and with the implementation of Croatian language in the documents, the term *sacro bosco* was abandoned. However, the forbidden groves themselves did not disappear but continued to exist under a different name with the change of language.

Namely, in 1876 the Law on the division of municipal lands was enacted by the Austrian government in an effort to tackle what they perceived was the destructive influence of municipal ownership over woodlands. This Law stipulated that municipal lands that were suitable for agriculture had to be divided between the people living in the municipality, while the remaining land, usually pastures and woodlands, would remain as it was. However, on those parcels that were in the cadastral survey designated as wooded pastures, foresters were supposed to establish 'proper' woodland, that

is high forest. The establishment of woodland was supposed to be carried out by allowing natural regeneration of existing woodland and if necessary, reforestation. In order to achieve this, pasture and other types of exploitation had to be prohibited, at least until the stand had developed enough to resist the damage from animals, and the area had to be enclosed (Wessely, 1878; Šumarski list, 1905; Petrović, 1910). The term which was used from then on for the areas where woodland was supposed to be established is *branjevina* which translates as *protected area* (of woodland).<sup>25</sup> In reports submitted by municipal forester in Šibenik, protected areas were listed separately from woodlands.<sup>26</sup> Also, the perimeter of protected areas was supposed to be marked with piles of stones.<sup>27</sup> Besides protection from exploitation, numerous reports show that protected areas are where most of reforestation was being carried out.<sup>28</sup> These regulations which include prohibition of exploitation, demarcation with stones and reforestation are similar, if not identical, to the regulations concerning the establishment of forbidden groves from the earlier period and can most easily be understood as their continuation.

Closer examination of areas designated as woodland on the topographical map from the third military survey (1869-1887) shows that sometimes within them delineation lines were drawn (Fig. 5). These lines could have signified a different type of management of woodland. Differences between these delineated areas are more evident on the topographical map from the third military survey but produced in the scale of 1:75,000 as these maps showed details of the vegetation cover unlike those produced in the scale of 1:25,000 (Fig. 6). In Podi woodland the line stretching across the middle of woodland distinguishes an area depicted as covered with single trees from a more wooded area with groups of trees. On the other hand, in the woodland near Zlo-sela village the line delineates areas which had the same vegetation structure (depicted as scattered single trees).

A report from 1882 reveals that throughout Dalmatia 692 protected areas were established with the aim of renewing or establishing a woodland (Šumarski list, 1882). By 1905 it was reported that an area of 155,000 ha was put under protection, while pasture of goats was banned on 455,000 ha (Šumarski list, 1905). It was also mandatory by law that a fifth of the woodland area in each settlement was supposed to be under protection from exploitation. Despite this, it was not always the case and on Žirje island it was

<sup>23</sup> HR-DASI-Šibenik 19.-20.st. Šumarstvo. 4<sup>th</sup> June 1848. Šumarstvo. *Prospetto degli spazi poco produttivi, produttivi ed improduttivi... del Sindacato di Zlarin*. N. 1394.

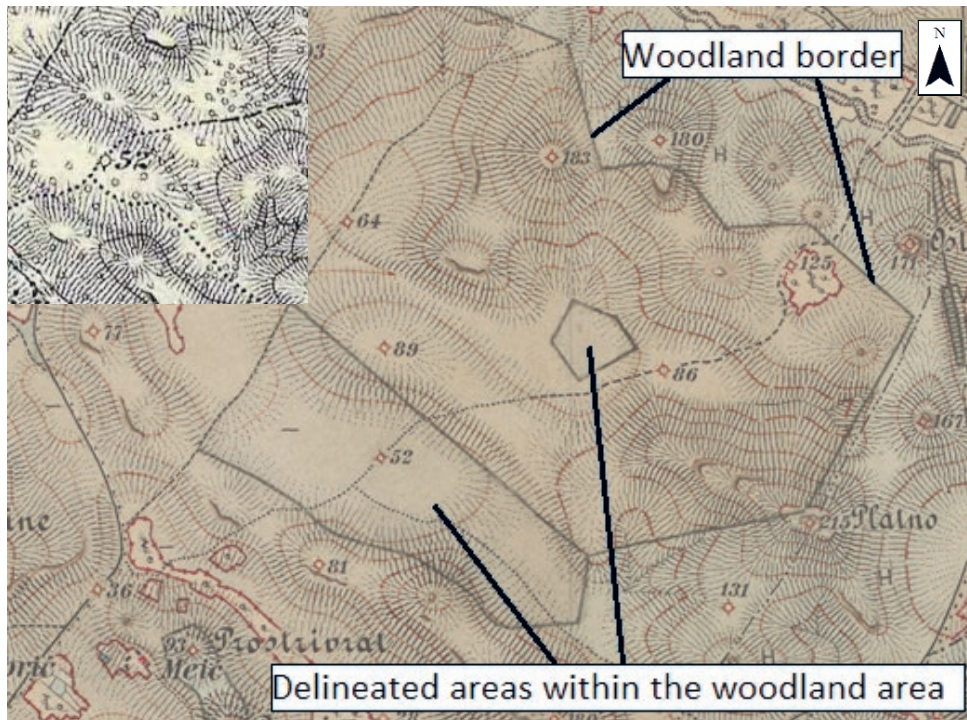
<sup>24</sup> HR-DASI-Šibenik 19.-20.st. 4<sup>th</sup> June 1848. Šumarstvo. *Prospetto degli spazi poco produttivi, produttivi ed improduttivi... del Sindacato di Zlarin*. N. 1394.

<sup>25</sup> *Branjevina* is a noun which is derived from the verb *braniti* which translates as *to protect*.

<sup>26</sup> HR-DASI-Šibenik 19.-20.st. February 1902. *Izješće kotarkom poglavarstvu*. N. 63.

<sup>27</sup> HR-DASI-Šumarstvo 19.-20.st. 26<sup>th</sup> June 1893. N. 8300.; HR-DASI-Šumarstvo 19.-20.st. 25<sup>th</sup> March 1896. N. 41.

<sup>28</sup> HR-DASI-Šibenik 19.-20.st. 23<sup>rd</sup> February 1904. *Kotarskom poglavarstvu*. N. 1296; HR-DASI-Šumarstvo 19.-20.st. 1903. *Velika gradska proľjetna akcija oko pošumljavanja goleti šireg područja šibenske općine*.



**Figure 5.** Woodland in the hinterland of Zlosela (Pirovac) on third military survey (1869-1887) topographical maps in scale of 1:25,000 and in 1:75,000 (upper left corner). The map shows demarcation line existing within the same woodland, which implies that the areas had different management schemes because there was no difference in vegetation composition. It is likely that the demarcated areas were a protected area of the woodland (Source: 3rd Landesaufnahme (1869 - 1887), Zone 30, Column XIII, Section S0, BEV - Bundesamt für Eich- und Vermessungswesen).

**Slika 5.** Šuma u zaleđu Zlosela (Pirovac) na topografskoj karti treće vojne izmjere (1869-1887) u mjerilima 1:25,000 i 1:75,000 (gornji lijevi kut). Karta pokazuje liniju razgraničenja unutar iste šume što ukazuje da su područja imala različitu shemu upravljanja s obzirom da nije bilo razlike u kompoziciji vegetacije. Vjerojatno je da su obilježena područja šume zapravo bile branjevine (Source: 3rd Landesaufnahme (1869 - 1887), Zone 30, Column XIII, Section S0, BEV - Bundesamt für Eich- und Vermessungswesen).



**Figure 6.** Podi woodland near Bratiškovci is shown in the third military survey (1869-1887) topographical map on a scale of 1:75,000. A demarcation line in the middle of the woodland parcel (probably piles of stones) delineates a more wooded part from the less wooded one (Source: MAPIRE.eu).

**Slika 6.** Šuma Podi u blizini Bratiškova prikazana na topografskoj karti treće vojne izmjere (1869-1887) u mjerilu 1:75,000. Linija razgraničenja koja je ucrtana po sredini šumske parcele (vjerojatno nakupine kamenja) odvaja šumovitiji dio od onog manje šumovitog (Source: MAPIRE.eu).



reported in 1908 that none of the woodland areas enjoyed protection because people refused to stop using them as pastures.<sup>29</sup> This would explain why it was difficult for both French and Austrian administrations to keep forbidden groves under real protection and why they were often reported to be devastated.

## CONCLUSION ZAKLJUČAK

Understanding forest history in Dalmatia is rather complex because of the frequent changes of governments and gaps in sources caused by numerous wars. However, existing evidence demonstrates that ever since the Venetian period, Dalmatian governments were facing continuous problem of managing the exploitation of woodlands as they were a crucial part of local livelihood. Research by Jedlowski (1975) showed that one of the crucial ways in controlling overexploitation in the Venetian period was the practice of setting aside a section of woodland for regeneration and prohibiting exploitation there. When the French took over Dalmatia, the same practice continued thanks to Vincenzo Dandolo. These protected parts of woodland were called sacro bosco or forbidden groves and because of different translations of the term they have been misidentified as a unique French invention. In reality, as confirmed by this research, they represent the centuries-old fundamental form of Dalmatian woodland management not much different from those that existed in the previous administrations and those that came afterwards. In fact, Austrian regulations concerning forbidden groves did not differ in any way from the French ones and therefore represent evidence of continuity of regulations from French into Austrian period. When in the second half of the 19<sup>th</sup> century the Italian language was replaced with the Croatian as the official, the term sacro bosco was dropped from use and was replaced with the Croatian word branjevina or protected area.

This shows need for more detailed research in forest history of Dalmatia.

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## SAŽETAK

Za razliku od kontinentalnih šuma s dugom poviješću šumarstva, prošlost dalmatinskih šuma je do danas ostala uglavnom slabo istražena tema. U malobrojnim radovima na ovu temu francuska uprava na čelu s Vicenzom Dandolom je posebno hvaljena zbog brige o šumama, a kao Dandolo najveći doprinos se spominje osnivanje tzv. *sacri boschi*, odnosno svetih gajeva. Cilj ovoga rada je na temelju arhivskih spisa i drugih podataka iz 19. stoljeća, i na primjeru šireg prostora Šibenika, istražiti nastanak i nestanak svetih gajeva s ciljem doprinošenja boljem poznavanja prošlosti dalmatinskih šuma. Dandolo je 1806. zbog nestašice šuma naredio da svako selo mora ograditi dio zemljišta za podizanje šume i u potpunosti zaustaviti njeno iskorištavanje. Godine 1807. već 360 dalmatinskih sela je ogradilo takvo zemljište. Takvi šumarci nazivali su se *sacro bosco*, s obzirom da je talijanski jezik tada bio službeni, a Kesterčanek je prvi šumar koji je *sacro bosco* preveo kao sveti gaj, čime se taj pojam do danas uvriježio u šumarskoj literaturi. Arhivski spisi pokazuju kako se vegetacija u svetim gajevima sastojala od autohtonih vrsta karakterističnih za našu obalu, a bilo je prisutno i pošumljavanje egzotičnijim vrstama. Austrijska uprava je nakon preuzimanja vlasti 1814. godine ponovila sve propise vezane za svete gajeve, čime se, suprotno pisanju šumara kroz 20. stoljeće, nastavila tradicija njihovog osnivanja. Zapisi o podizanju svetih gajeva sežu sve do polovice 19. stoljeća. Dvojezični proglas o osnivanju svetih gajeva iz 1821. pokazuje da je termin *sacro bosco* s talijanskog na starohrvatski preveden kao zabranjeni gaj, dok raniji prijevodi od Kesterčanekovog ukazuju kako termin nema nikakvu sakralnu poveznicu. *Sacri boschi* su predstavljali dijelove postojećih šumaraka koji su propisima bili zabranjeni za iskorištavanje zbog obnove vegetacije te bi pravilan prijevod termina bio zabranjen gaj. Isti princip zaštite šuma od eksploatacije primjenjivali su i Mlečani, stoga se *sacro bosco* može smatrati oblikom upravljanja dalmatinskim šumama s vrlo dugom tradicijom. Nestankom talijanskog jezika kao službenog, termin *sacro bosco* izlazi iz upotrebe te se zamjenjuje hrvatskim terminom branjevina.

**KLJUČNE RIJEČI:** *sacro bosco*, sveti gaj, zabranjeni gaj, povijest šuma, Dalmacija